

Abstract

Method for generating a trigger signal according to the current differential protection principle and current differential protection arrangement

The invention relates to a method and an arrangement for generating a trigger signal according to the current differential protection principle in the case of a fault on a section of an electrical power supply system, in which differential current values and stabilization current values are detected and monitored with regard to exceeding limit values; a trigger signal is generated if positive results of the instances of monitoring are present.

In order, in the case of such a method, to obtain a trigger signal reliably and certainly in the case of a fault on the section of an electrical power supply system, according to the invention, the differential current values ( $i_d$ ) and the stabilization current values ( $i_s$ ) are calculated with instantaneous values of the detected power supply currents as instantaneous values. A first measurement quantity ( $i_{sd}$ ), which is proportional to the differential quotient of the stabilization current ( $i_s$ ) with respect to time, and a second measurement quantity ( $i_{dd}$ ), which is proportional to the differential quotient of the differential current ( $i_d$ ) with respect to time, are formed and a check is made by means of evaluation to determine whether the two measurement quantities ( $i_{sd}$ ,  $i_{dd}$ ) exceed a predetermined limit value of the differential quotient of the differential current with respect to time ( $i_{gd}$ ). If the instances of evaluation and the instances of monitoring produce positive results, the trigger signal (A) is generated.